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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

WAYMO LLC,

Plaintiff,

v.

UBER TECHNOLOGIES, INC.; OTTOMOTTO LLC; OTTO TRUCKING LLC,

Defendants.

CASE NO. 3:17-cv-00939-WHA

PLAINTIFF WAYMO'S RESPONSES TO QUESTIONS FOR HEARING ON PLAINTIFF'S MOTION FOR PROVISIONAL RELIEF

UNREDACTED VERSION OF DOCUMENT SUBMITTED UNDER SEAL

Waymo hereby responds to the pre-hearing questions issued by the Court.

Question One. Waymo does not claim trade secret protection of "*any* LiDAR design that uses any [redacted] Instead, Waymo's trade secrets concern the specific types of [redacted] recited in Waymo's trade secret list. For example, Trade Secret 1 recites a LiDAR PCB in which "[redacted]." Dkt. 25-7 ¶1. Trade Secrets 6 and 94-99 concern specific designs of all [redacted]. *Id.* ¶¶6, 94-99. These trade secrets recite [redacted] on each. *See id.* However, it is important to note that even a LiDAR with only minor modifications to these precise specifications would still come within the scope of Trade Secrets 6 and 94-99. *SkinMedica, Inc. v. Histogen Inc.*, 869 F. Supp. 2d 1176, 1197 (S.D. Cal. 2012).

Question Two. The Court inquires whether simple optics dictate that for "[redacted]," diodes would be [redacted]. (As an initial matter, as described above, merely "[redacted]" is not the specific trade secret asserted.) The predicate to this question is *itself* a Trade Secret that Waymo discovered. Dkt. 25-7 ¶28 (concerning LiDAR system "[redacted]"). As Mr. Droz explained, the Waymo team optimized on a [redacted]. Dkt. 25-31 ¶¶20-22. This trade secret is not known to other self driving car companies or LIDAR vendors to Waymo's knowledge. Waymo's engineers discovered this trade secret by leveraging its vast amount of self-driving data from experimentation and trial and error with its custom LIDAR devices. None of the public domain evidence identified by Defendants contains or suggests it.

Once Waymo determined that [redacted] was desirable for its overall vertical resolution profile in a self-driving LiDAR environment, Waymo developed the further solution of [redacted] in the recited trade secrets. The below figure illustrates the phenomenon. In GBr2 (blue dots), [redacted].

[redacted]

Moreover, to implement [redacted] as claimed by Waymo in its trade secrets complicates the system's overall design and has other drawbacks—even assuming one had identified this as a desirable problem to solve in order to optimize the system's overall vertical resolution pattern. This is one of the reasons why Waymo did not implement it in GBr2.

Question Three. Waymo arrived at the amount of [redacted] used in Waymo's GBr LiDAR after months of research and development and trial and error, and spent years validating it in a production environment. The [redacted] reflects Waymo's resulting knowledge about the benefits of particular amounts of [redacted] weighed against associated drawbacks with [redacted]. Waymo's optimized amount is superior to other amounts, and provides economic value, for several reasons:

First, the [redacted] is optimized to be [redacted], which is an aspect of Waymo's design, subject to a different

(and asserted) trade secret. Dkt. 25-61 ¶50; Dkt. 25-7 ¶7; *see id.* ¶¶9-10. This [redacted] provides a number of benefits for Waymo's designs, including the ability to [redacted]. *Id.* ¶9.

Second, it must be [redacted]. In the context of the low-cost component sourcing relied on by Waymo to manufacture a LiDAR at less than one-tenth the cost of the prevalent commercial alternative, [redacted]. Dkt. 25-8 at 15. Having [redacted] is undesirable because it would prevent the [redacted] as used in Waymo's design. In addition, with a [redacted], the result would be [redacted]. Droz Dep. 67:7-14 & Ex. 1023; Dkt. 25-61 ¶50. The [redacted] is also optimized to not be too large such that [redacted]. *Id.* ¶49. [redacted]. The amount is further optimized to not be [redacted] such that it effectively cannot be used to generate a [redacted] to use for LiDAR sensing purposes. Finally, the amount is optimized such that it is not [redacted] causing the diode to break.

Waymo provided evidence of some of the beneficial effects of [redacted] as in Waymo's design, in the record at the places cited above. Waymo is unaware of any other LiDAR systems using [redacted] at all, as recited in Trade Secret No. 7. Moreover, Waymo expended significant time and effort optimizing the amount in light of

the considerations outlined above and should thus, at a minimum, be entitled to keep the fruits of this optimization as a trade secret. Any LiDAR system with [redacted] would only amount to a minor modification of Waymo's valuable trade secret and should be considered to be within the scope of Waymo's asserted trade secret. *SkinMedica*, 869 F. Supp. 2d at 1197.

Question Four. Waymo is unaware of a "standard practice," for distributing 64 laser diodes across multiple printed circuit boards in a LiDAR system. However, U.S. Patent No. 8,767,190 assigned to LIDAR vendor Velodyne, describes mounting each laser diode on its own individual circuit board. The '190 Patent describes two LIDAR devices, comprising 64 and 32 laser diodes respectively. (Dkt. No. 181-3 at 3:51-63, 5:6-15, 5:25-31.) Figure 8 of the '190 Patent illustrates a LIDAR device and shows that each of its 32 laser diodes is mounted on its own circuit board, or "hybrid." (*Id*. at Fig. 8; *see also id*. at 6:1-10 ("One of the features allowing for compact size and improved performance of the version of FIG. 3 is the use of thin circuit boards such as ceramic hybrid boards for each of the emitters and detectors. … In the preferred example, the thin circuit boards are in the form of ceramic hybrid boards that are about 0.015 inches thick, with only one emitter mounted on each emitter board, and only one detector mounted on each detector board.").) Although the '190 Patent does not provide an illustration of the laser diode arrangement for 64 diodes, Velodyne's commercial 64 diode device was known to include each laser diode mounted on its own individual board. (Dkt. No. 25-61 at ¶ 35.)

Question Five. The medium-range cavity of Fuji, which comprises [redacted], corresponds closely to Waymo's GBr3 midrange LiDAR ([redacted]), as though by derivation:

- **Field of View**. The Fuji medium-range cavity has an overall field of view (FOV) of [redacted] Dkt. 297-1 ¶17. The GBr3 FOV is [redacted]. Dkt. 25-8 at 16. The boards serve the comparable function of providing medium-range LiDAR detection.
- **Distribution of Diodes**. The [redacted] in the Fuji mid-range cavity, arranged from top to bottom, are distributed [redacted]

[redacted] Dkt. 297-1 ¶17. [redacted] Dkt. 25-8 at 16.

Trade-secret law does not have an equivalent to the patent law doctrine of equivalents, but has a broader concept. A finding of trade secret misappropriation does not require a showing that all the elements have been copied. Instead, a finding of trade secret misappropriation can rest on substantial similarity or substantial derivation of the products or processes at issue. *See SkinMedica*, 869 F. Supp. 2d at 1197 ("In the context of trade secret misappropriation, information may be improperly 'used' in that it is unlawfully acquired and then built upon or modified before being disclosed or benefit derived."); *Mangren Research & Dev. Corp. v. Nat'l Chem. Co., 87 F.3d 937* (7th Cir. 1996) ("We have observed before, in fact, that if trade secret law were not flexible enough to encompass modified or even new products that are substantially derived from the trade secret of another, the protections that law provides would be hollow indeed." (citations omitted).)

Question Six. Waymo does not believe anyone other than Defendants manufacture or commercialize LiDAR systems using Waymo's purported trade secrets. Defendants have presented no evidence to the contrary. Rather, as discussed above, Velodyne's commercial LiDAR systems use an arrangement of laser diodes that positions each diode individually on its own circuit board. (Dkt. No. 181-3 at Fig. 8; Dkt. No. 25-61 at ¶ 35.) The only LiDAR-specific references that Defendants relied on to support their "public domain" arguments were the Velodyne '190 Patent and PanDAR publication—neither of which disclose Waymo's trade secrets. (*See* Dkt. No. 245-3 at 4:10-23.)

Waymo has not disclosed its asserted trade secrets to any public agency. In general, Waymo has not disclosed its laser technology to public agencies because the technology is not yet commercialized. For example, FDA regulations require manufacturers of laser-based products to

submit "Radiation Safety Product Reports," but only "prior to commercialization." 21 C.F.R. § 1002.1 and 1002.10. Waymo has not yet commercialized its LiDAR technology and therefore it has not yet submitted applicable FDA reports.

Under the law, it is possible that technology discovered separately by Waymo and another company could be deemed Waymo's trade secret. CUTSA provides that technology is entitled to trade secret protection if it "[d]erives independent economic value, actual or potential, from not being ***generally known*** to the public or to other persons who can obtain economic value from its disclosure or use." Cal. Civ. Code § 3426.1(d) (emphasis added). DTSA includes similar language. 18 U.S.C. § 1839(3)(B). Thus, if Waymo's technology is not generally known, but happens to have been developed by another company and kept secret (that Waymo is not aware of), then Waymo is still entitled to trade secret protection over the technology. *See E.I. DuPont de Nemours & Co. v. United States*, 288 F.2d 904, 911 (Ct. Cl. 1961) ("A plurality of individual discoverers may have protectable, wholly separate rights in the same trade secret."). But again, there is no evidence demonstrating independent discovery of Waymo's trade secrets by any other company.

Question Seven. Waymo initially notes that *use* of a trade secret is not required for misappropriation. Trade secret misappropriation and/or theft includes wrongful acquisition, disclosure, or transmission of a trade secret, in addition to wrongful use of it. *See* 18 U.S.C. §1832(a); Cal. Civ. Code § 3426.1(b).

But even if Defendants have not yet actually misappropriated Waymo's trade secrets – under any definition of the term – they may still be enjoined on a theory of *threatened* misappropriation. *See* Cal. Civ. Code § 3426.2(a) ("Actual or threatened misappropriation may be enjoined."); *Cent. Valley Gen. Hosp. v. Smith*, 162 Cal. App. 4th 501, 524 (5th Dist. 2008) ("the use of the word 'or' in Civil Code section 3426.2, subdivision (a) plainly means that an injunction may be based either on actual misappropriation or on threatened misappropriation."); *see also United States v. W. T. Grant Co.*, 345 U.S. 629, 633 (1953) ("The purpose of an injunction is to prevent future violations and, of course, it can be utilized even without a showing of past wrongs."

(internal citation omitted)). Specifically, Defendants' threatened misappropriation of Waymo's trade secrets is readily shown by Levandowski's undisputed theft of those trade secrets, combined with Levandowski's continued employment as a high-ranking executive in Defendants' self-driving car project.

Notably, the case of *Xantrex Tech. Inc. v. Advanced Energy Indus., Inc.*, No. 07-cv-02324, 2008 WL 2185882 (D. Colo. May 23, 2008), applying Colorado's Uniform Trade Secret Act that is similar to the California and Federal Acts in all relevant respects, found threatened trade secret misappropriation based on similar facts to the Court's hypothetical. In *Xantrex*, former Xantrex employee Christopher Thompson—who was a high-level engineering executive—"rapidly accessed Xantrex's trade secret documents just prior to leaving Xantrex" by downloading them onto his laptop. *Xantrex*, 2008 WL 2185882 at *4, *19. He then went to work for defendant Advanced Energies Industries (AE), in a similar role to the role he held at Xantrex. Xantrex sought to preliminarily enjoin AE from using its trade secrets, on a theory of threatened misappropriation. The court granted the preliminary injunction, even while apparently crediting defendants' representation that Mr. Thompson had not (yet) disclosed the stolen trade secret documents to anyone else at AE. As the court held: "While Defendants maintain that Mr. Thompson has not shared these documents with AE, it is the ready recollection of Xantrex's possible trade secrets in that situation which gives me pause when considering a threatened disclosure of Xantrex's trade secrets. This is of particular concern when Mr. Thompson is the point person for solar inverters at AE. Mr. Thompson does not have to transmit the information to anyone at AE for AE to use Xantrex's trade secrets. I find, after carefully reviewing the record for circumstantial evidence of disclosure of this information and finding persuasive indicators that threatened disclosure exists, that there is a substantial likelihood of success on the merits on the CUTSA claims for relief . . . ." *Id.* at *19; *see also id.* at *15 (finding irreparable injury as well); *id.* at *23 (ruling that "Mr. Thompson *and Advanced Energy* shall be enjoined from disclosing, disseminating or otherwise using any Xantrex trade secrets and must immediately destroy any copies thereof that are in their possession or control." (emphasis added)).

At a minimum, as in *Xantrex*, Levandowski's theft of Waymo's trade secrets, in conjunction with Levandowski's employment with Defendants, creates a serious threat that Levandowski will use those trade secrets for Defendants' benefit—*even if* Waymo could not show that Defendants have yet been privy to those trade secrets. Thus, a preliminary injunction against Defendants is warranted even under the Court's hypothetical, on the theory of threatened misappropriation.

Moreover, even if Defendants themselves have somehow not misappropriated Waymo's trade secrets, they still *ratified* Mr. Levandowski's misappropriation by continuing to employ him despite full knowledge of his wrongful acts. Cal. Civ. Code § 2310 ("A ratification can be made . . . by accepting or retaining the benefit of the act, with notice thereof."); *Ajaxo Inc. v. E*Trade Grp., Inc.*, 135 Cal. App.4th 21, 67-68 (2005) (conduct of an employee who misappropriated trade secrets was ratified where ratifying company's "top management had the opportunity to know of and either ignore or actually approve of" the theft). Indeed, after Levandowski took Waymo's trade secrets and started his own company, Uber bought that company and has continued to employ Levandowski through today, despite clear evidence of Levandowski's theft. *See* Dkt. 245-3 at 11:16-12:5. By ratifying Levandowski's misappropriation, Defendants are responsible for it.

Question Eight. If Waymo shows that Levandowski misappropriated trade secrets, but fails to show that Defendants did so, Defendants may nonetheless be enjoined based on the fact that they employed an executive who misappropriated Waymo's trade secrets and who remains in a position to misuse those secrets for Defendants' benefit. Again, *Xantrex* is squarely on point. Defendants would also be liable based on the doctrine of ratification, as discussed above.

Question Nine. No, courts routinely impose accounting obligations even where a plaintiff has not met all of the requirements for preliminary injunctive relief. *See Aggreko, LLC v. Koronis*, C.A. No. 13-13034, 2013 WL 6835165, at *7 (D. Mass. 2013) (ordering defendant to "provide an accounting for any products, plans, services, contracts, or other customer materials that involve or rely on any Aggreko confidential or trade secret information" despite finding that plaintiff had "failed to demonstrate that any harm has occurred thus far and that any irreparable harm is likely

in the future"); *Nationwide Mut. Ins. v. Stenger,* 695 F. Supp. 688, 690-91 (D. Conn. 1988) (denying plaintiff's motion for a preliminary injunction because plaintiff had not shown that it was likely to succeed on the merits, but nevertheless noting that "plaintiff may be entitled to an accounting"); *c.f. Bayer Corp. v. Roche Molecular Sys., Inc.*, 72 F. Supp. 2d 1111, 1120-21 (N.D. Cal. 1999) (Alsup, J.) (denying plaintiff's motion for a preliminary injunction because defendants' "counter evidence is strong enough to prevent a probability of success on the merits" but nevertheless allowing "periodic and targeted discovery permitting counsel for Bayer to learn of Mr. Betzelos' communications and activities most likely to put Bayer's trade secrets at risk").

Question Ten. [Directed to Defendants only]

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